

# Paperboard Mills: 2002

Issued September 2004

EC02-311-322130

## 2002 Economic Census

*Manufacturing*

Industry Series



U S C E N S U S B U R E A U

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



## CONTENTS

Introduction to the Economic Census .....	v
Manufacturing .....	ix

### Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002 .....	2
3. Detailed Statistics by Industry: 2002 .....	3
4. Industry Statistics by Employment Size: 2002.....	6
5. Industry Statistics by Primary Product Class Specialization: 2002 .....	7
6a. Products Statistics: 2002 and 1997 .....	8
6b. Product Class Shipments for Selected States: 2002 and 1997 .	10
7. Materials Consumed by Kind: 2002 and 1997.....	11

### Appendixes

A. Explanation of Terms .....	A-1
B. NAICS Codes, Titles, and Descriptions .....	B-1
C. Methodology .....	C-1
D. Geographic Notes .....	--
E. Metropolitan and Micropolitan Statistical Areas .....	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997 .....	F-1

-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
322130, Paperboard mills .....	87	199	46 189	2 560 643	35 623	75 485	1 842 601	10 786 000	10 076 280	20 853 608	891 189
2002..	N	N	48 773	2 601 324	37 922	83 347	1 857 059	11 029 318	10 915 434	21 895 908	1 029 554
2001..	N	N	50 918	2 694 952	39 336	86 288	1 930 201	11 913 907	11 476 865	23 327 058	1 186 211
2000..	N	N	51 196	2 680 605	39 430	86 017	1 914 086	10 429 221	10 828 652	21 302 662	1 272 635
1999..	N	N	53 681	2 712 826	41 286	90 205	1 930 963	10 110 081	10 838 580	20 942 481	1 393 812
1998..	N	N	54 507	2 668 462	41 840	93 107	1 914 203	9 041 128	11 098 969	20 113 697	1 614 318
1997..	81	214									

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
322130, Paperboard mills												
United States .....	—	199	189	46 189	2 560 643	35 623	75 485	1 842 601	10 786 000	10 076 280	20 853 608	891 189
California .....	—	15	14	1 293	69 411	977	1 974	47 400	284 953	348 687	632 572	45 442
Connecticut .....	—	5	4	531	26 795	410	898	18 595	123 459	116 167	240 625	5 080
Georgia .....	—	14	14	5 523	306 752	4 279	8 788	221 532	1 410 801	984 159	2 395 988	74 653
Illinois .....	—	4	4	426	17 482	357	715	14 011	43 670	32 983	76 393	1 523
Louisiana .....	—	6	6	3 172	184 581	2 493	5 338	137 079	1 060 870	1 026 958	2 086 122	92 545
New Jersey .....	—	7	5	468	23 300	372	868	16 801	45 880	58 994	104 683	8 605
North Carolina .....	8	7	6	1 074	53 514	829	1 800	38 203	231 222	190 453	419 477	38 517
Pennsylvania .....	2	8	8	849	42 833	674	1 499	31 791	154 315	157 753	312 132	17 701
South Carolina .....	—	6	6	2 524	114 213	1 968	4 300	80 587	473 640	408 815	885 957	22 862
Virginia .....	—	11	11	3 646	216 950	2 693	5 767	150 544	977 468	775 436	1 752 916	59 427

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>322130, Paperboard mills</b>	
Companies <sup>1</sup> .....	number.. 87
All establishments <sup>2</sup> .....	number.. 199
Establishments with 1 to 19 employees .....	number.. 10
Establishments with 20 to 99 employees .....	number.. 75
Establishments with 100 employees or more .....	number.. 114
All employees <sup>3</sup> .....	number.. 46 189
Total compensation .....	\$1,000.. 3 316 274
Annual payroll .....	\$1,000.. 2 560 643
Total fringe benefits .....	\$1,000.. 755 631
Production workers, average for year .....	number.. 35 623
Production workers on March 12 .....	number.. 35 389
Production workers on May 12 .....	number.. 36 111
Production workers on August 12 .....	number.. 36 215
Production workers on November 12 .....	number.. 34 716
Production worker hours .....	1,000.. 75 485
Production worker wages .....	\$1,000.. 1 842 601
Total cost of materials .....	\$1,000.. 10 076 280
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 7 626 117
Resales .....	\$1,000.. 134 558
Purchased fuels .....	\$1,000.. 1 300 247
Purchased electricity .....	\$1,000.. 814 250
Contract work .....	\$1,000.. 201 108
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 20 623 737
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. 12 010 972
Total value of shipments .....	\$1,000.. 20 853 608
Primary products value of shipments .....	\$1,000.. 18 979 432
Secondary products value of shipments .....	\$1,000.. 1 501 645
Total miscellaneous receipts .....	\$1,000.. 372 531
Value of resales .....	\$1,000.. 137 033
Contract receipts .....	\$1,000.. D
Other miscellaneous receipts .....	\$1,000.. D
Primary products specialization ratio .....	percent.. 93
Value of primary products shipments made in all industries .....	\$1,000.. 19 587 524
Value of primary products shipments made in this industry .....	\$1,000.. 18 979 432
Value of primary products shipments made in other industries .....	\$1,000.. 608 092
Coverage ratio .....	percent.. 97
Value added .....	\$1,000.. 10 786 000
Total inventories, beginning of year .....	\$1,000.. 1 409 312
Finished goods inventories .....	\$1,000.. 475 032
Work-in-process inventories .....	\$1,000.. 57 821
Materials and supplies inventories .....	\$1,000.. 876 459
Total inventories, end of year .....	\$1,000.. 1 456 977
Finished goods inventories .....	\$1,000.. 487 513
Work-in-process inventories .....	\$1,000.. 54 012
Materials and supplies inventories .....	\$1,000.. 915 452
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. 29 788 017
Total capital expenditures (new and used) .....	\$1,000.. 891 189
Buildings and other structures (new and used) .....	\$1,000.. 80 708
Machinery and equipment (new and used) .....	\$1,000.. 810 481
Automobiles, trucks, etc., for highway use .....	\$1,000.. 13 479
Computers and peripheral data processing equipment .....	\$1,000.. 41 345
All other expenditures for machinery and equipment .....	\$1,000.. 755 657
Total retirements .....	\$1,000.. 868 040
Gross value of depreciable assets at end of year .....	\$1,000.. 29 811 166
Depreciation charges during year .....	\$1,000.. 1 810 087
Total rental payments .....	\$1,000.. 101 621
Buildings and other structures .....	\$1,000.. 23 536
Machinery and equipment .....	\$1,000.. 78 085
Total other expenses <sup>4</sup> .....	\$1,000.. 1 814 076
Response coverage ratio <sup>5</sup> .....	percent.. 93
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 629 413
Communications services <sup>4</sup> .....	\$1,000.. 15 420
Legal services <sup>4</sup> .....	\$1,000.. 20 839
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 1 625
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 2 882
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 12 004
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 77 081
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 45 858
Taxes and license fees <sup>4</sup> .....	\$1,000.. 118 882
All other expenses <sup>4</sup> .....	\$1,000.. 890 074

See footnotes at end of table.

**Table 3. Detailed Statistics by Industry: 2002—Con.**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>3221301, Paperboard mills - integrated producer</b>	
Companies <sup>1</sup> .....	number.. 18
All establishments <sup>2</sup> .....	number.. 46
Establishments with 1 to 19 employees .....	number.. —
Establishments with 20 to 99 employees .....	number.. —
Establishments with 100 employees or more .....	number.. 46
All employees <sup>3</sup> .....	number.. 27 706
Total compensation .....	\$1,000.. 2 091 716
Annual payroll .....	\$1,000.. 1 596 086
Total fringe benefits .....	\$1,000.. 495 630
Production workers, average for year .....	number.. 21 217
Production workers on March 12 .....	number.. 20 980
Production workers on May 12 .....	number.. 21 745
Production workers on August 12 .....	number.. 21 651
Production workers on November 12 .....	number.. 20 480
Production worker hours .....	\$1,000.. 44 595
Production worker wages .....	\$1,000.. 1 149 134
Total cost of materials .....	\$1,000.. 6 493 513
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 4 987 521
Resales .....	\$1,000.. D
Purchased fuels .....	\$1,000.. 801 040
Purchased electricity .....	\$1,000.. 504 506
Contract work .....	\$1,000.. D
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 13 559 052
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. 10 122 586
Total value of shipments .....	\$1,000.. 13 422 936
Primary products value of shipments .....	\$1,000.. X
Secondary products value of shipments .....	\$1,000.. X
Total miscellaneous receipts .....	\$1,000.. X
Value of resales .....	\$1,000.. D
Contract receipts .....	\$1,000.. X
Other miscellaneous receipts .....	\$1,000.. X
Primary products specialization ratio .....	percent.. X
Value of primary products shipments made in all industries .....	\$1,000.. X
Value of primary products shipments made in this industry .....	\$1,000.. X
Value of primary products shipments made in other industries .....	\$1,000.. X
Coverage ratio .....	percent.. X
Value added .....	\$1,000.. 6 925 937
Total inventories, beginning of year .....	\$1,000.. 1 069 898
Finished goods inventories .....	\$1,000.. 371 848
Work-in-process inventories .....	\$1,000.. 53 559
Materials and supplies inventories .....	\$1,000.. 644 491
Total inventories, end of year .....	\$1,000.. 1 075 941
Finished goods inventories .....	\$1,000.. 377 583
Work-in-process inventories .....	\$1,000.. 44 338
Materials and supplies inventories .....	\$1,000.. 654 020
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. X
Total capital expenditures (new and used) .....	\$1,000.. X
Buildings and other structures (new and used) .....	\$1,000.. X
Machinery and equipment (new and used) .....	\$1,000.. X
Automobiles, trucks, etc., for highway use .....	\$1,000.. X
Computers and peripheral data processing equipment .....	\$1,000.. X
All other expenditures for machinery and equipment .....	\$1,000.. X
Total retirements .....	\$1,000.. X
Gross value of depreciable assets at end of year .....	\$1,000.. X
Depreciation charges during year .....	\$1,000.. X
Total rental payments .....	\$1,000.. X
Buildings and other structures .....	\$1,000.. X
Machinery and equipment .....	\$1,000.. X
Total other expenses <sup>4</sup> .....	\$1,000.. X
Response coverage ratio <sup>5</sup> .....	percent.. X
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. X
Communications services <sup>4</sup> .....	\$1,000.. X
Legal services <sup>4</sup> .....	\$1,000.. X
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. X
Advertising and promotional services <sup>4</sup> .....	\$1,000.. X
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. X
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. X
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. X
Taxes and license fees <sup>4</sup> .....	\$1,000.. X
All other expenses <sup>4</sup> .....	\$1,000.. X

See footnotes at end of table.

**Table 3. Detailed Statistics by Industry: 2002—Con.**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>3221302, Paperboard mills - nonintegrated producer</b>	
Companies <sup>1</sup> .....	number.. 69
All establishments <sup>2</sup> .....	number.. 153
Establishments with 1 to 19 employees .....	number.. 10
Establishments with 20 to 99 employees .....	number.. 75
Establishments with 100 employees or more .....	number.. 68
All employees <sup>3</sup> .....	number.. 18 483
Total compensation .....	\$1,000.. 1 224 558
Annual payroll .....	\$1,000.. 964 557
Total fringe benefits .....	\$1,000.. 260 001
Production workers, average for year .....	number.. 14 406
Production workers on March 12 .....	number.. 14 409
Production workers on May 12 .....	number.. 14 366
Production workers on August 12 .....	number.. 14 564
Production workers on November 12 .....	number.. 14 236
Production worker hours .....	1,000.. 30 890
Production worker wages .....	\$1,000.. 693 467
Total cost of materials .....	\$1,000.. 3 582 767
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 2 638 596
Resales .....	\$1,000.. D
Purchased fuels .....	\$1,000.. 499 207
Purchased electricity .....	\$1,000.. 309 744
Contract work .....	\$1,000.. D
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 7 064 685
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. 1 888 386
Total value of shipments .....	\$1,000.. 7 430 672
Primary products value of shipments .....	\$1,000.. X
Secondary products value of shipments .....	\$1,000.. X
Total miscellaneous receipts .....	\$1,000.. X
Value of resales .....	\$1,000.. X
Contract receipts .....	\$1,000.. D
Other miscellaneous receipts .....	\$1,000.. X
Primary products specialization ratio .....	percent.. X
Value of primary products shipments made in all industries .....	\$1,000.. X
Value of primary products shipments made in this industry .....	\$1,000.. X
Value of primary products shipments made in other industries .....	\$1,000.. X
Coverage ratio .....	percent.. X
Value added .....	\$1,000.. 3 860 063
Total inventories, beginning of year .....	\$1,000.. 339 414
Finished goods inventories .....	\$1,000.. 103 184
Work-in-process inventories .....	\$1,000.. 4 262
Materials and supplies inventories .....	\$1,000.. 231 968
Total inventories, end of year .....	\$1,000.. 381 036
Finished goods inventories .....	\$1,000.. 109 930
Work-in-process inventories .....	\$1,000.. 9 674
Materials and supplies inventories .....	\$1,000.. 261 432
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. X
Total capital expenditures (new and used) .....	\$1,000.. X
Buildings and other structures (new and used) .....	\$1,000.. X
Machinery and equipment (new and used) .....	\$1,000.. X
Automobiles, trucks, etc., for highway use .....	\$1,000.. X
Computers and peripheral data processing equipment .....	\$1,000.. X
All other expenditures for machinery and equipment .....	\$1,000.. X
Total retirements .....	\$1,000.. X
Gross value of depreciable assets at end of year .....	\$1,000.. X
Depreciation charges during year .....	\$1,000.. X
Total rental payments .....	\$1,000.. X
Buildings and other structures .....	\$1,000.. X
Machinery and equipment .....	\$1,000.. X
Total other expenses <sup>4</sup> .....	\$1,000.. X
Response coverage ratio <sup>5</sup> .....	percent.. X
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. X
Communications services <sup>4</sup> .....	\$1,000.. X
Legal services <sup>4</sup> .....	\$1,000.. X
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. X
Advertising and promotional services <sup>4</sup> .....	\$1,000.. X
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. X
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. X
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. X
Taxes and license fees <sup>4</sup> .....	\$1,000.. X
All other expenses <sup>4</sup> .....	\$1,000.. X

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
322130, Paperboard mills											
All establishments .....	—	199	46 189	2 560 643	35 623	75 485	1 842 601	10 786 000	10 076 280	20 853 608	891 189
Establishments with—											
1 to 4 employees .....	6	4	a	D	D	D	D	D	D	D	D
5 to 9 employees .....	9	1	a	D	D	D	D	D	D	D	D
10 to 19 employees .....	2	5	60	2 517	47	93	1 859	3 723	3 870	8 165	586
20 to 49 employees .....	1	19	639	26 845	499	1 044	19 105	82 332	96 423	179 428	6 718
50 to 99 employees .....	—	56	4 226	224 024	3 268	6 912	159 787	963 540	780 595	1 743 001	78 528
100 to 249 employees .....	—	61	9 372	470 349	7 285	15 947	333 306	1 753 195	1 655 309	3 396 728	147 426
250 to 499 employees .....	—	23	8 521	515 647	6 386	13 797	365 340	2 345 438	2 320 830	4 648 179	208 970
500 to 999 employees .....	—	25	16 533	982 891	12 941	27 100	726 725	4 529 799	3 894 660	8 414 870	305 627
1,000 to 2,499 employees .....	—	5	6 820	337 696	5 182	10 570	235 948	1 105 842	1 322 682	2 459 228	143 085
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	—	—	—	—	—	—	—	—	—	—	—

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.



**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
322130	Paperboard mills .....	199	46 189	2 560 643	35 623	75 485	1 842 601	10 786 000	10 076 280	20 853 608	891 189
3221301	Unbleached kraft packaging and industrial converting paperboard (80 percent or more virgin woodpulp) .....	39	17 902	1 048 862	13 690	29 014	749 130	4 965 565	4 308 013	9 250 950	387 864
3221303	Bleached packaging and industrial converting paperboard (80 percent or more virgin bleached woodpulp). Semichemical paperboard, including corrugating medium (75 percent or more virgin woodpulp) .....	19	11 265	618 067	8 827	18 286	459 009	2 372 353	2 461 054	4 859 294	230 239
3221305	Recycled paperboard .....	7	1 774	94 572	1 429	2 702	71 230	410 739	283 350	692 413	28 863
3221307	Wet machine board, including binders' board and shoe board ....	123	15 025	791 051	11 517	25 168	558 761	3 016 365	3 011 521	6 018 518	243 270
3221309		3	134	4 893	94	208	2 442	13 679	7 950	20 889	376

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
322130	Paperboard mills.....	2002.. N 1997.. N	X X	X X	19 587 524 18 681 404
3221301	Unbleached kraft packaging and industrial converting paperboard (80 percent or more virgin woodpulp) .....	2002.. N 1997.. N	X X	X X	7 993 971 7 443 912
32213011	Unbleached kraft linerboard .....	2002.. N 1997.. N	X X	X X	6 688 596 6 195 050
3221301111	Unbleached kraft linerboard .....	1,000 s tons. 2002.. 17 1997.. 22	X X	P16 839.7 18 560.3	6 688 596 6 195 050
32213012	Other unbleached kraft packaging and industrial converting paperboard, including tube, can, and drum paperboard, corrugating medium, folding carton-type board, etc. ....	2002.. N 1997.. N	X X	X X	1 304 751 1 248 862
3221301221	Other unbleached kraft packaging and industrial converting paperboard, including tube, can, and drum paperboard, corrugating medium, folding carton-type board, etc. ....	1,000 s tons. 2002.. 14 1997.. 11	X X	S 2 962.4	1 304 751 1 248 862
3221301Y	Unbleached kraft packaging and industrial converting paperboard (80 percent or more virgin woodpulp), nsk .....	2002.. N 1997.. N	X X	X X	624 —
3221301YVV	Unbleached kraft packaging and industrial converting paperboard (80 percent or more virgin woodpulp), nsk .....	2002.. N 1997.. N	X X	X X	624 —
3221303	Bleached packaging and industrial converting paperboard (80 percent or more virgin bleached woodpulp) .....	2002.. N 1997.. N	X X	X X	4 154 755 3 971 630
32213031	Bleached folding carton-type paperboard .....	2002.. N 1997.. N	X X	X X	1 599 798 1 848 375
3221303111	Bleached folding carton-type paperboard .....	1,000 s tons. 2002.. 9 1997.. 11	X X	2 423.5 2 585.4	1 599 798 1 848 375
32213032	Bleached milk carton board .....	2002.. N 1997.. N	X X	X X	820 967 923 553
3221303221	Bleached milk carton board .....	1,000 s tons. 2002.. 6 1997.. 5	X X	1 192.4 1 166.1	820 967 923 553
32213033	Other solid bleached paperboard, including linerboard, heavyweight cup and round nested food container board, plate, dish, and tray stock, and paperboard for moist, liquid, and oily foods .....	2002.. N 1997.. N	X X	X X	1 661 861 1 199 702
3221303331	Bleached linerboard .....	1,000 s tons. 2002.. 8 1997.. 9	X X	451.1 275.9	277 548 193 337
3221303341	Bleached heavyweight cup and round nested food container paperboard .....	1,000 s tons. 2002.. 6 1997.. 10	X X	P648.4 856.8	423 205 564 273
3221303351	Bleached plate, dish, and tray paperboard stock .....	1,000 s tons. 2002.. 9 1997.. 9	X X	9397.3 362.5	214 073 211 968
3221303361	Other solid bleached paperboard, including paperboard for moist, liquid, and oily foods .....	1,000 s tons. 2002.. 11 1997.. 6	X X	S 376.7	747 035 230 124
3221303Y	Bleached packaging and industrial converting paperboard (80 percent or more virgin bleached woodpulp), nsk .....	2002.. N 1997.. N	X X	X X	72 129 —
3221303YVV	Bleached packaging and industrial converting paperboard (80 percent or more virgin bleached woodpulp), nsk .....	2002.. N 1997.. N	X X	X X	72 129 —
3221305	Semichemical paperboard, including corrugating medium (75 percent or more virgin woodpulp) .....	2002.. N 1997.. N	X X	X X	1 049 286 815 423
32213051	Semichemical paperboard, including corrugating medium (75 percent or more virgin woodpulp) .....	2002.. N 1997.. N	X X	X X	1 049 286 815 423
3221305100	Semichemical paperboard, including corrugating medium (75 percent or more virgin woodpulp) .....	1,000 s tons. 2002.. 9 1997.. 9	X X	93 146.9 P3 475.7	1 049 286 815 423
3221307	Recycled paperboard .....	2002.. N 1997.. N	X X	X X	6 338 853 D
32213071	Recycled corrugating medium .....	2002.. N 1997.. N	X X	X X	1 571 754 1 405 449
3221307111	Recycled corrugating medium .....	1,000 s tons. 2002.. 27 1997.. 34	X X	P4 557.4 5 722.1	1 571 754 1 405 449
32213072	Recycled linerboard and container chip and filler board .....	2002.. N 1997.. N	X X	X X	1 838 226 1 854 183
3221307221	Recycled linerboard .....	1,000 s tons. 2002.. 19 1997.. 25	X X	4 581.6 5 433.3	1 798 521 1 800 003
3221307231	Recycled container chip and filler board .....	1,000 s tons. 2002.. 5 1997.. 5	X X	P98.4 S	39 705 54 180
32213073	Recycled clay-coated folding carton board .....	2002.. N 1997.. N	X X	X X	1 016 266 1 046 000
3221307341	Recycled clay-coated folding carton board .....	1,000 s tons. 2002.. 8 1997.. 11	X X	92 266.3 2 219.4	1 016 266 1 046 000
32213074	Recycled unlined folding carton chipboard, and lined, including kraft and white .....	2002.. N 1997.. N	X X	X X	482 746 478 890
3221307451	Recycled unlined folding carton chipboard .....	1,000 s tons. 2002.. 10 1997.. 15	X X	S 788.5	251 635 292 992
3221307461	Recycled lined folding carton board, including kraft and white .....	1,000 s tons. 2002.. 9 1997.. 13	X X	437.8 434.6	231 111 185 898
32213075	Other recycled paperboard, including setup, tube, can, and drum stock, gypsum linerboard, panelboard and wallboard stock, and other special combination packaging and converting paperboard .....	2002.. N 1997.. N	X X	X X	1 304 760 1 567 273
3221307571	Recycled setup board .....	1,000 s tons. 2002.. 6 1997.. 6	X X	S 175.5	115 207 77 582
3221307575	Recycled tube, can, and drum paperboard stock .....	1,000 s tons. 2002.. 8 1997.. 14	X X	91 214.2 1 754.4	483 446 699 169
3221307581	Recycled gypsum linerboard .....	1,000 s tons. 2002.. 8	X	914.4	393 432

See footnotes at end of table.

Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
322130	Paperboard mills—Con.				
3221307	Recycled paperboard—Con.				
32213075	Other recycled paperboard, including setup, tube, can, and drum stock, gypsum linerboard, panelboard and wallboard stock, and other special combination packaging and converting paperboard—Con.				
3221307581	Recycled gypsum linerboard—Con.				
3221307591	Other recycled paperboard, including panelboard and wallboard stock and other special combination packaging and industrial converting paperboard . . . . . 1,000 s tons . . . . .	1997 . . 6	X	870.5	390 640
3221307Y	Recycled paperboard, nsk . . . . .	2002 . . 16	X	S	312 675
3221307YV	Recycled paperboard, nsk . . . . .	1997 . . 19	X	1 030.1	399 882
3221307YV	Recycled paperboard, nsk . . . . .	2002 . . N	X	X	125 101
3221307YV	Recycled paperboard, nsk . . . . .	1997 . . N	X	X	D
3221307YV	Recycled paperboard, nsk . . . . .	2002 . . N	X	X	125 101
3221307YV	Recycled paperboard, nsk . . . . .	1997 . . N	X	X	D
3221309	Wet machine board, including binders' board and shoe board . . . . .	2002 . . N	X	X	38 709
32213091	Wet machine board, including binders' board and shoe board . . . . .	1997 . . N	X	X	86 373
3221309100	Wet machine board, including binders' board and shoe board . . . . .	2002 . . N	X	X	38 709
3221309100	Wet machine board, including binders' board and shoe board . . . . .	1997 . . N	X	X	86 373
3221309100	Wet machine board, including binders' board and shoe board . . . . .	2002 . . 4	X	958.5	38 709
3221309100	Wet machine board, including binders' board and shoe board . . . . .	1997 . . 7	X	S	86 373
322130W	Paperboard mills, nsk, total . . . . .	2002 . . N	X	X	11 950
322130WY	Paperboard mills, nsk, total . . . . .	1997 . . N	X	X	D
322130WY	Paperboard mills, nsk, total . . . . .	2002 . . N	X	X	11 950
322130WY	Paperboard mills, nsk, total . . . . .	1997 . . N	X	X	D
322130WYWW	Paperboard mills, nsk, for nonadministrative-record establishments . . . . .	2002 . . N	X	X	11 950
322130WYWW	Paperboard mills, nsk, for nonadministrative-record establishments . . . . .	1997 . . N	X	X	D
322130WYWW	Paperboard mills, nsk, for administrative-record establishments . . . . .	2002 . . N	X	X	—
322130WYWW	Paperboard mills, nsk, for administrative-record establishments . . . . .	1997 . . N	X	X	—

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3221301	Unbleached kraft packaging and industrial converting paperboard (80 percent or more virgin woodpulp)	
	United States..... 2002..	7 993 971
	..... 1997..	7 443 912
	Georgia ..... 2002..	1 180 925
	..... 1997..	1 199 083
	Louisiana ..... 2002..	1 182 529
	..... 1997..	1 089 855
3221303	Bleached packaging and industrial converting paperboard (80 percent or more virgin bleached woodpulp)	
	United States..... 2002..	4 154 755
	..... 1997..	3 971 630
3221305	Semichemical paperboard, including corrugating medium (75 percent or more virgin woodpulp)	
	United States..... 2002..	1 049 286
	..... 1997..	815 423
3221307	Recycled paperboard	
	United States..... 2002..	6 338 853
	..... 1997..	D
	California ..... 2002..	595 186
	..... 1997..	640 538
	Connecticut ..... 2002..	235 603
	..... 1997..	238 606
	Georgia ..... 2002..	343 513
	..... 1997..	252 501
	Illinois ..... 2002..	69 840
	..... 1997..	142 879
	New Jersey ..... 2002..	102 886
	..... 1997..	152 882
	North Carolina ..... 2002..	180 591
	..... 1997..	56 924
	Pennsylvania ..... 2002..	307 042
	..... 1997..	276 492
	South Carolina ..... 2002..	177 084
	..... 1997..	186 187
	Virginia ..... 2002..	277 183
	..... 1997..	518 020
3221309	Wet machine board, including binders' board and shoe board	
	United States..... 2002..	38 709
	..... 1997..	86 373

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
322130	Paperboard mills		
00900001	Total materials .....	2002.. X	7 626 117
11331009	Southern pine pulpwood bolts and logs .....	1997.. X	8 795 656
11331023	Other softwood pulpwood bolts and logs, including Douglas fir and Jack pine .....	2002.. 13 491.8	830 449
	1,000 standard cords .....	1997.. 16 584.7	1 409 503
	1,000 standard cords .....	2002.. 1 596.9	108 878
	1997.. D		D
32100009	Softwood pulpwood wood chips, slabs, cores, sawdust, bark, and other mill residues .....	2002.. 11 991.7	878 382
11331011	Southern mixed hardwood pulpwood bolts and logs .....	1997.. P13 302.1	1 031 638
11331025	Other hardwood pulpwood bolts and logs .....	2002.. 4 921.4	323 137
	1,000 standard cords .....	1997.. 4 745.9	363 157
	1,000 standard cords .....	2002.. 884.9	51 383
	1997.. P1 455.7		97 329
32100011	Hardwood pulpwood wood chips, slabs, cores, sawdust, bark, and other mill residues .....	2002.. 4 008.2	326 281
32518103	Chlorine (100 percent Cl basis) .....	1997.. 7 364.0	401 339
32518107	Sodium hydroxide (caustic soda)(100 percent NaOH) .....	2002.. 55.2	7 162
	1,000 s tons .....	1997.. 130.9	29 133
	1,000 s tons .....	2002.. 578.4	95 021
	1997.. 894.3		142 395
32518823	Sodium chlorate (100 percent NaClO <sub>3</sub> ) .....	2002.. 226.0	77 716
32510007	Other sodium compounds .....	1997.. 254.8	89 849
32518813	Aluminum sulfate (17 percent Al <sub>2</sub> O <sub>3</sub> ) .....	2002.. X	27 173
	1,000 s tons .....	1997.. X	39 502
	1,000 s tons .....	2002.. 214.1	23 481
	1997.. 292.1		29 152
32599811	Rosin sizing .....	2002.. P143.0	67 183
32741003	Lime .....	1997.. P143.7	75 234
21232400	Kaolin and ball clay .....	2002.. 307.4	22 014
	1,000 s tons .....	1997.. 510.6	33 374
	1,000 s tons .....	2002.. Q564.0	88 673
	1997.. 526.1		70 909
31122113	Starch .....	2002.. 630.7	110 785
32521131	Synthetic resins .....	1997.. 879.7	165 875
32513103	Titanium dioxide, composite and pure (100 percent TiO <sub>2</sub> ) .....	2002.. 304.3	125 206
	mil lb .....	1997.. 298.0	145 941
	mil lb .....	2002.. 91.0	76 449
	1997.. 85.2		89 338
32518829	Calcium carbonate, precipitated (100 percent CaCO <sub>2</sub> ) .....	2002.. 327.3	46 628
32500009	All other chemicals (including organic) .....	1997.. Q201.7	27 572
32210029	Woodpulp produced at affiliated or associated mills at other locations .....	2002.. X	608 442
	1,000 s tons (dry basis) .....	1997.. X	541 253
	1,000 s tons (dry basis) .....	2002.. 46.3	15 393
	1997.. 156.9		72 515
32210031	Woodpulp, purchased (market) .....	2002.. 162.2	73 645
00190006	Mixed wastepaper, excluding plant's own broke paper .....	1997.. 222.5	101 614
00190007	Mechanical news wastepaper, excluding plant's own broke paper .....	2002.. S	154 297
	1,000 s tons .....	1997.. P1 951.9	71 920
	1,000 s tons .....	2002.. P757.9	60 477
	1997.. 1 269.6		50 023
00190072	Other mechanical wastepaper, excluding plant's own broke paper .....	2002.. 443.6	65 902
00190073	Corrugated wastepaper (including kraft), excluding plant's own broke paper .....	1997.. 821.4	51 526
00190009	High grade pulp substitutes wastepaper, excluding plant's own broke paper .....	2002.. 13 380.3	1 253 858
	1,000 s tons .....	1997.. 16 088.0	1 725 959
	1,000 s tons .....	2002.. 211.7	36 443
	1997.. 662.9		110 750
00190010	High grade deinking wastepaper, excluding plant's own broke paper .....	2002.. 207.1	58 900
00190015	Other fibrous materials, including rags, straw, and bagasse .....	1997.. 122.1	17 710
32610013	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes .....	2002.. D	D
	1,000 s tons .....	1997.. D	D
	1,000 s tons .....	2002.. X	D
	1997.. X		D
31323001	Nonwoven fabrics .....	2002.. D	D
001900A2	Packaging paper and plastics film (including coated, laminated, printed, etc.) .....	1997.. D	D
32552003	Glues and adhesives .....	2002.. X	30 055
	mil lb .....	1997.. X	40 769
	mil lb .....	2002.. Q4.2	1 753
	1997.. S		977
32221001	Paperboard containers, boxes, and corrugated paperboard .....	2002.. X	127 173
00970099	All other materials and components, parts, containers, and supplies .....	1997.. X	91 427
00971000	Materials, ingredients, containers, and supplies, nsk .....	2002.. X	1 192 284
	1997.. X		1 262 157
	1997.. X		638 349
	1997.. X		307 734

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.